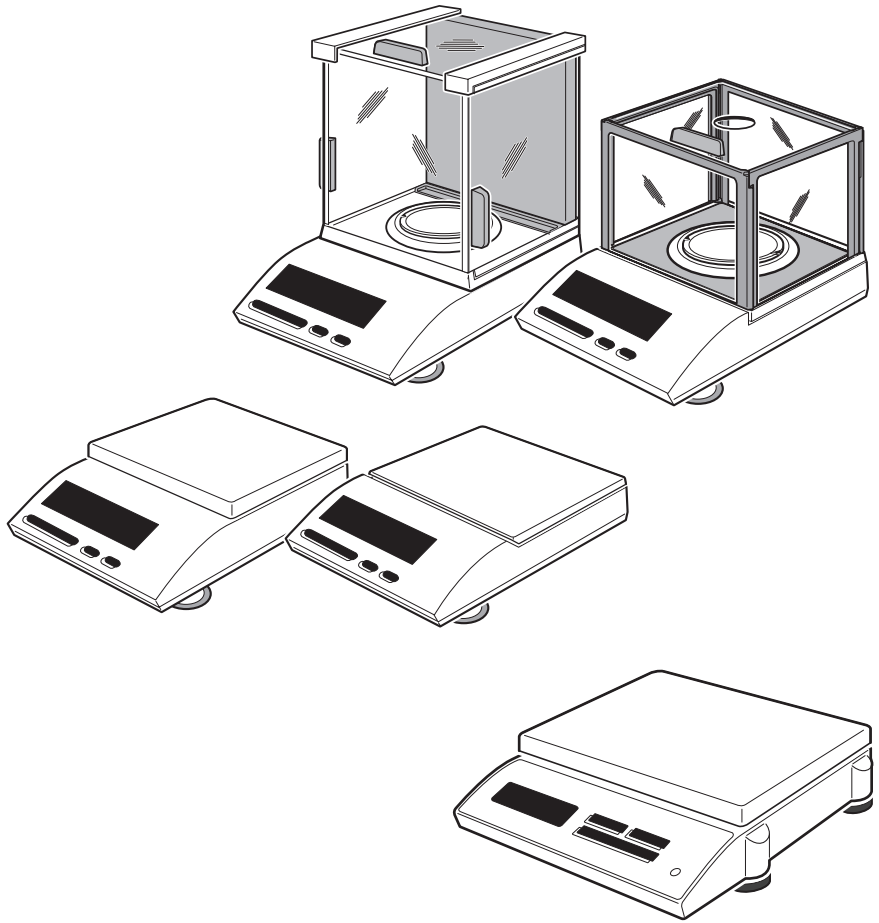
Operating instructions

METTLER TOLEDO
B balance lines

- College-B
- CB
- GB



METTLER TOLEDO

Short-form operating instructions

Press key **briefly**

Press and **hold** key until the desired display appears

▼ Automatic procedure

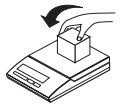
Switching on

On → 88888888 → ------ → 0.00 g

Switching off

On →0/T← → OFF → Off

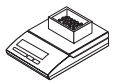
Simple weighing



0.00 g → 1182.03 g → 1250.00 g

Taring

0.00 g → 12.10 1 g → →0/T← 0.00 g



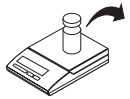
95.97 g

Unit switching

22.00 g → ⇆ 14.14 dwt → ⇆ 110.00 ct

Calibration (adjusting)

Cal/Menu → CAL → ------ → 2000.00 → ------ → 0.00 → ------ → CAL donE → 0.00 g



Contents

1 Getting to know the B balance lines 2
1.1 Introducing the B balance lines 2
1.2 Layout of the B balances 3
1.3 The keys of the B balances (overview) 4

2 Startup 5
2.1 Unpacking / Standard equipment 5
2.2 Cautionary notes 5
2.3 Setting up 6
2.4 Calibration (adjusting) 8

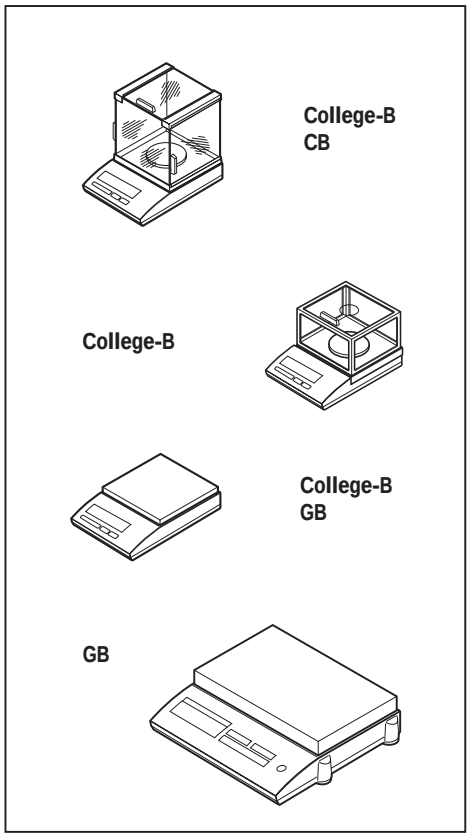
3 Weighing 9
3.1 On/off switching 9
3.2 Simple weighing 9
3.3 Taring 10
3.4 METTLER TOLEDO DeltaRange balances 10
3.5 Switching of weight units 11

4 Menu 12
4.1 Overview 12
4.2 Description of the menu options 13
4.2.1 Reset and printout of the balance setting 13
4.2.2 Adjusting the vibrations adapter on CB and GB balances 13
4.2.3 Unit 1, 2, 3 – selecting unit 1, 2, 3 with CB and GB balances 14
4.2.4 A. oFF – setting automatic shutdown 14
4.2.5 Selecting peripheral device 15
4.2.6 Selecting data transfer mode 15
4.2.7 Selecting data transfer format 15
4.2.8 Setting baud rate (data transmission rate) 16
4.2.9 Setting parity/bits 16
4.2.10 Setting handshake 16

5 Technical data and optional equipment 17
5.1 Technical data 17
5.2 Interface 19
5.3 Optional equipment 19

6 Appendix 20
6.1 Printout examples with LC-P45 and GA42 Printers 20
6.2 Preventive maintenance 21
6.3 What if...? 22
6.4 Index 23

1 Getting to know the B balance lines



1.1 Introducing the B balance lines

Three specially oriented B balance lines

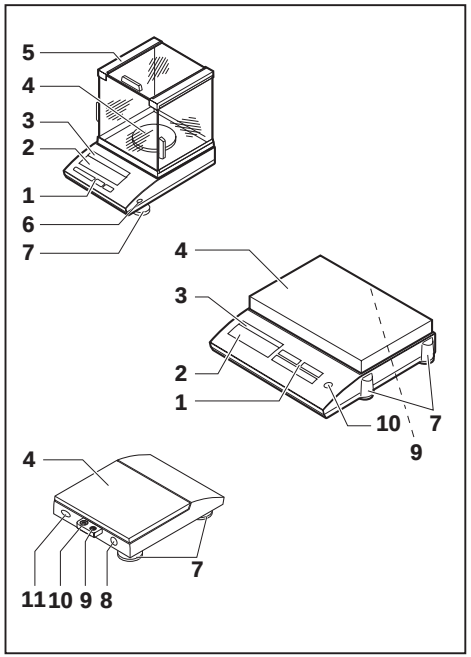
We have derived three lines for special application fields from the standard range of the B balances: School balances (College-B), carat balances (CB) and gold balances (GB). These balances are geared to the special requirements of the respective segments with regard to type of weighing and functions.

METTLER TOLEDO **DeltaRange** balances have a movable fine range with 10 times smaller display increments (section 3.4).

All B balances are fitted with an RS232C interface as standard.

Notes

- Certified versions of the CB and GB balances are also available, please ask your METTLER TOLEDO dealer for details.
- If you wish to build on what you have learned about weighing in these operating instructions, you will find valuable tips in the booklet "Weighing the right way" 720906.



1.2 Layout of the B balances

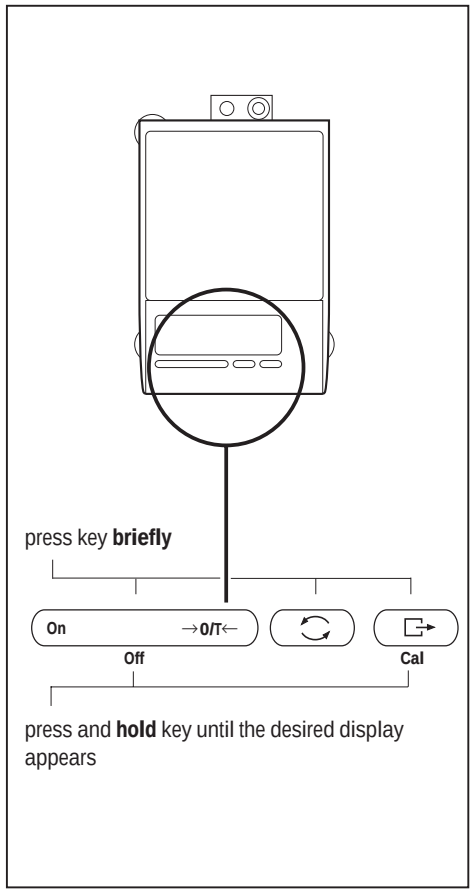
1 Keys
2 Display
3 Model plate[1)]
4 Weighing pan/platform
5 Draft shield
6 Certification switch for weights and measures inspector and service engineer
7 Leveling feet
8 AC adapter socket
9 Provision for antitheft device
10 Leveling control
11 RS232C interface

Keys, operation and display are identical for all B balances.

[1)] With details of:

Max = maximum capacity
d = readability
*Min = minimum capacity (recommended minimum load for certified balances)
*e = verification scale interval (smallest display increment tested in certification)

* Relevant only for certified balances



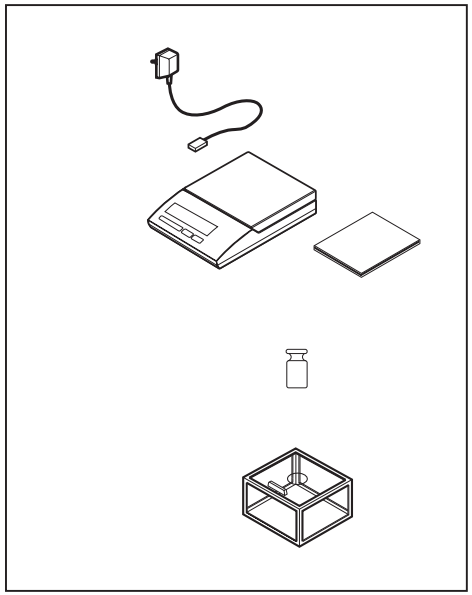
1.3 The keys of the B balances (overview)

B balances have two operator control levels: the **weighing mode** and the **menu**. The keys have different meanings, depending on the operator control level and how long a key is pressed.

Weighing mode (operation)	
press briefly	**press and hold**
On • Switch on →0/T← • Tare	On →0/T← Off • Switch off
⇆ • Switch ⇆ • Change settings	
⇨ • Print ⇨ • Confirm settings	Cal • Calibrate (adjust) Cal • Call menu

Menu (called up with Cal)	
press briefly	**press and hold**
→0/T← • Abort	———
⇆ • Change settings	———
⇨ • Select menu options	Cal • Store and quit menu

2 Startup



2.1 Unpacking / Standard equipment

All B balances are supplied in an environmentally harmless package. The standard equipment of the B balances includes

- **AC adapter**, to national codes,
- **Weighing pan,**
- **operating instructions**, to allow optimum utilization of the capabilities of your balance,
- **Description of interface commands** ("MT-SICS Reference Manual, available in English only)
- **calibration weight**, with CB balances and College B154 only,
- **draft shield**, mounted with CB balances and College B154, for mounting by user with College B303,
- **carat pan**, with CB balances.

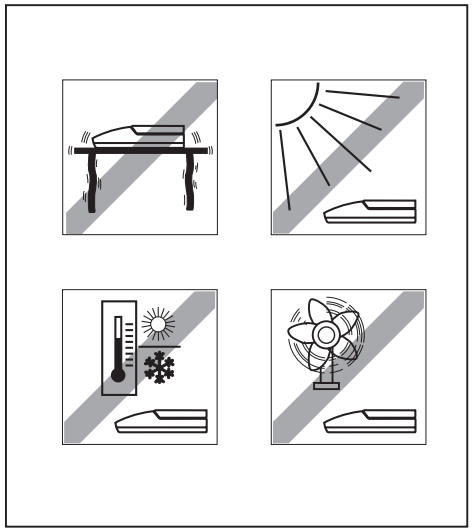
Note

Calibration weights can be ordered from METTLER TOLEDO for all other B balances, see section 5.2.

2.2 Cautionary notes

- B balances may not be operated in hazardous areas.[1)]
- Before attachment of the AC adapter, check whether the imprinted voltage value matches the local supply voltage. If it does not, contact your local METTLER TOLEDO dealer.

[1)] With the PS-EX2 power supply unit/AC adapter available as an option, all B balances can be used in Ex zone 2 (section 5.3).



2.3 Setting up

The optimum location

The correct location makes an important contribution to the accuracy of the weighing results of high-resolution analytical and precision balances.

Hence, ensure a

- stable, vibration-free position as horizontal as possible.

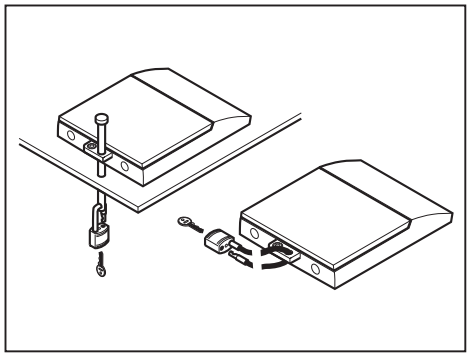
Avoid

- direct sunlight,
- excessive temperature fluctuations,
- drafts.

The best position is on a stable bench in a corner protected against drafts as far as possible from doors, windows, radiators or the ventilation slots of air conditioners.

Note

If vibrations can not be prevented, the balance can still provide accurate results if the vibration adapter is set accordingly, see section 4.2.2.

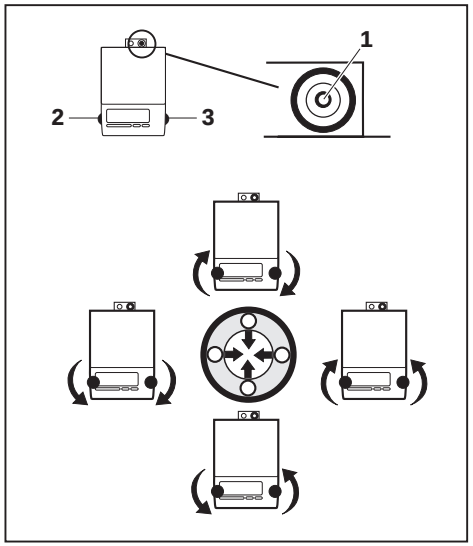


Antitheft device

B balances have provision for the attachment of an antitheft device.

The following antitheft devices are available:

• Bolt and lock (not for GB16001)	229175
• Cable with lock (for all models)	590101



Leveling

B balances have a level control and adjustable leveling feet to compensate for slight irregularities in the weighing bench surface. The balance is exactly horizontal when the air bubble **1** is in the middle.

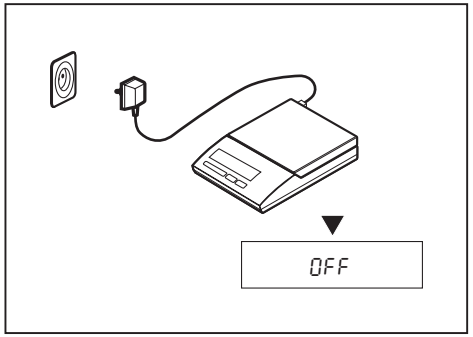
Procedure

Turn the two leveling feet **2** and **3** as shown in the diagram or described in the table so that air bubble 1 is in the middle.

Air bubble at	"12 o'clock"	turn both leveling feet clockwise
Air bubble at	"3 o'clock"	turn left leveling foot clockwise, right leveling foot counterclockwise
Air bubble at	"6 o'clock"	turn both leveling feet counterclockwise
Air bubble at	"9 o'clock"	turn left leveling foot counterclockwise, right leveling foot clockwise

Note

The balance must be releveled each time it is moved to a new location.



Connecting to the power supply

→ Before connection of the AC adapter, check that the imprinted voltage value matches the local supply voltage. If this is not the case, please contact your local METTLER TOLEDO dealer.

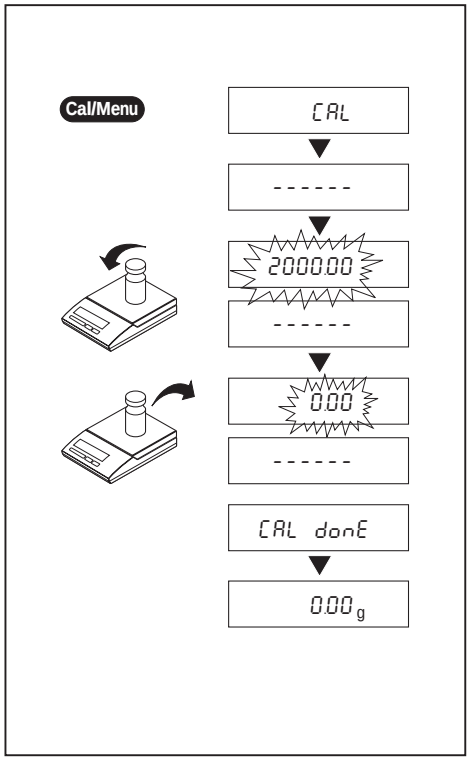
→ Plug AC adapter into AC adapter socket of the balance and connect to the power supply.

→ The balance performs a self-test. The test is finished when "OFF" appears.

→ Press (On) briefly: balance is in operational readiness. Before any work is performed with the balance, it should be calibrated (adjusted), (section 2.4).

Notes

To achieve accurate results with balances B154 and CB1503DR, these must be connected to the power supply for 20–30 minutes to warm up to the operating temperature. The PP-B10 PowerPack (rechargeable, external battery) can be used to operate all B balances independently of the power supply (section 4.2.4, 5.3).



2.4 Calibration (adjusting)

To obtain accurate weighing results, the balance must be matched to the acceleration due to gravity at its location.

Calibration is necessary

- before the balance is used for the first time,
- at regular intervals during weighing operations,
- after a change in location.

Procedure

To obtain accurate results, the balance must be connected to the power supply and allowed to warm up to the operating temperature for **20–30 minutes** before calibration.

→ Have required calibration weight ready (section 5.1).

→ Unload weighing pan.

→ Press and hold Cal until "CAL" appears in the display, release key.

→ The required calibration weight value flashes in the display.

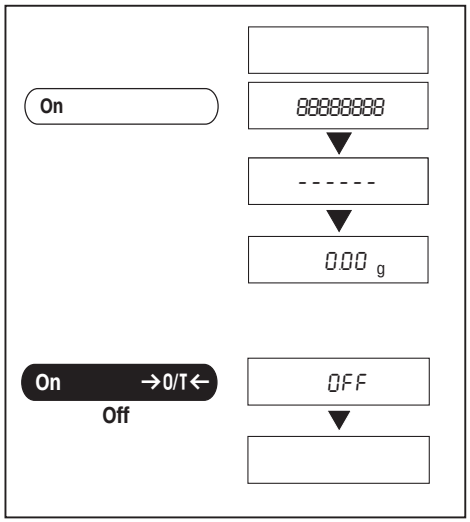
→ Place calibration weight in center of pan. The balance calibrates itself.

→ When "0.00" flashes, remove calibration weight.
The calibration (adjustment) is finished when "0.00 g" appears in the display. The balance is again in the weighing mode and ready for operation.

Note

- With **certified balances**, the calibration can be disabled after installation if required by the national certification regulations.
- The adjustment can be terminated at any time using the →0/T← key. The following message appears: Abort.

3 Weighing



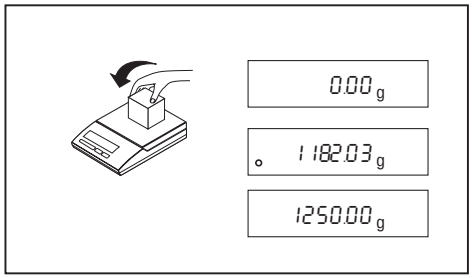
3.1 On/off switching

Switching on

→ Remove any load from weighing pan and press On briefly.
The balance performs a display test.
When zero is displayed, the balance is ready for operation.

Switching off

→ Press and hold On →0/T← Off until "OFF" appears in the display. Release key.

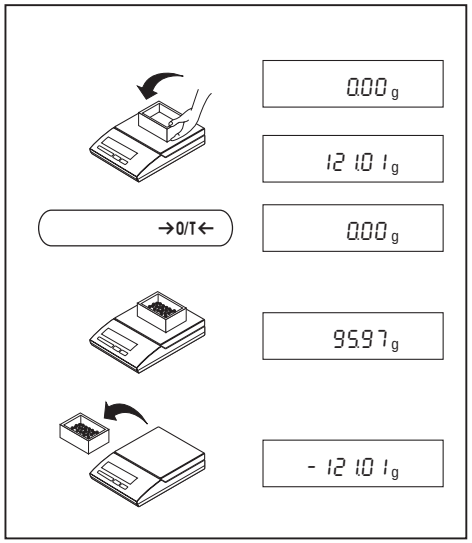


3.2 Simple weighing

→ Place weighing sample on the weighing pan.

→ Wait until the stability detector "o" fades.

→ Read off result.



3.3 Taring

→ Place empty container on the balance.

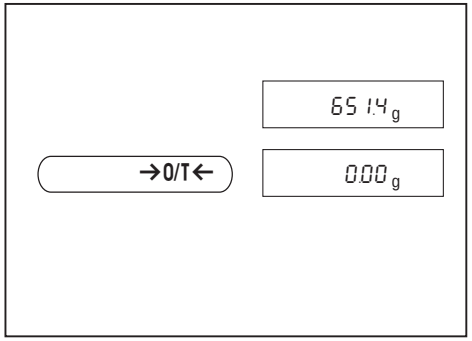
→ The weight is displayed.

→ Tare: press →0/T← briefly.

→ Add weighing sample to container, the net weight is displayed.
If the container is removed from the balance, the tare weight will be shown as a negative value.
The tare weight remains stored until →0/T← is again pressed or the balance is switched off.

Note

With METTLER TOLEDO DeltaRange balances, the fine range with its 10 times smaller display increments is again available after every taring operation.



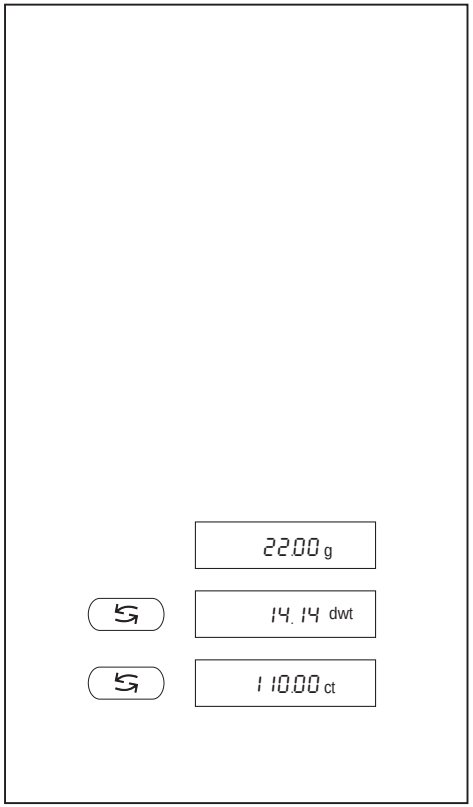
3.4 METTLER TOLEDO DeltaRange balances

METTLER TOLEDO **DeltaRange balances** have a movable fine range with 10 times smaller display increments. In this range there is always an additional decimal place in the display.

The balance operates in the fine range

- after switching on,
- after every taring operation.

If the fine range is exceeded (section 5.1), the balance display automatically switches to larger display increments.



3.5 Switching of weight units

All B balances can display weight values in different weight units.

- With **school balances** (College-B), the fixed units gram (g) and newton (N*) are available.
  * As the balance is an instrument to determine mass, when school balances are used to determine force a small measurement error arises. It depends on the geographic location as a **constant** conversion factor 1 kg = 9.80665 N is used.
- With **carat** and **gold** scales (CB, GB), 3 different units can be displayed in the weighing mode. These are freely selectable in the menu.
  The **factory setting differs** according to the country and the model.

Switching between unit 1, unit 2 and unit 3

Requirement
With CB and GB scales, different units must be activated in the menu (section 4) for Unit 1, 2 and 3.

→ Press ⇆, the display switches to the 2nd weight unit.

→ Press ⇆ again, the display switches to the 3rd weight unit.

Note

With **certified balances/scales,** the unit selection can be blocked following installation if required by national legislation.

4 Menu

4.1 Overview

On the menu, you can select unit 1, 2 and 3, and you can adjust the vibration adapter and the automatic shutdown. With **certified balances/scales,** the unit selection can be blocked following installation if required by national legislation. The **factory setting differs** according to the country and the model.

Entry into menu

Press and hold Cal until "MENU" appears in the display. Release key, the 1st menu option "rESEt" appears.

Select menu options

Press briefly. Press key repeatedly to view the current balance settings.

Modify settings

Press repeatedly until the desired setting appears.

Store settings

Press and hold Cal until "StorEd" appears. Release key, the balance returns to the weighing mode.

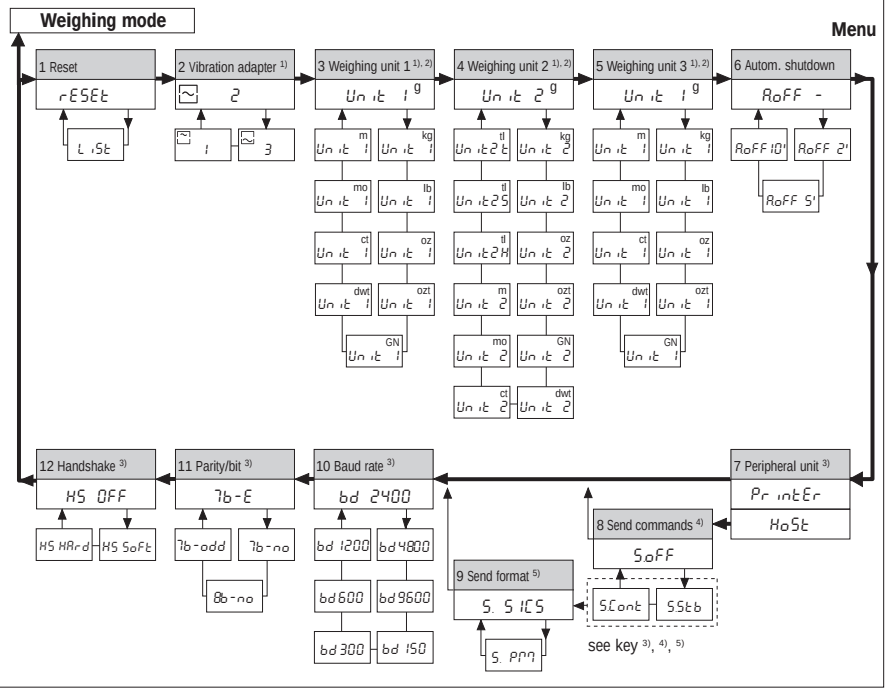
Abort

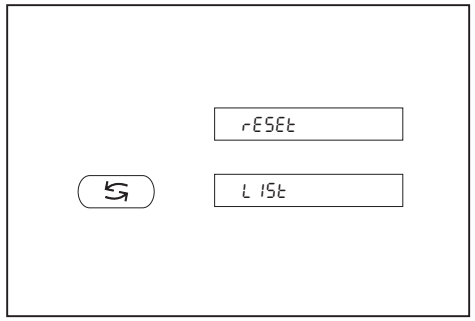
Press →0/T← briefly. The balance returns to the weighing mode without storing the changes.

Note

If no entry is made within 45 seconds, the balance returns to the weighing mode without storing the changes.

1) only with CB and GB balances
2) With certified balances, only the weighing units/functions allowed by the respective national weights and measures legislation may be selected.
3) These menu options are shown only if your balance is equipped with an RS232C interface.
4) These menu options are shown only if “HoSt” has been selected in menu option 4.2.5.
5) These menu options are shown only if “S.Stb” or “S.Cont” has been selected in menu option 4.2.6.





4.2 Description of the menu options

4.2.1 Reset and printout of the balance setting

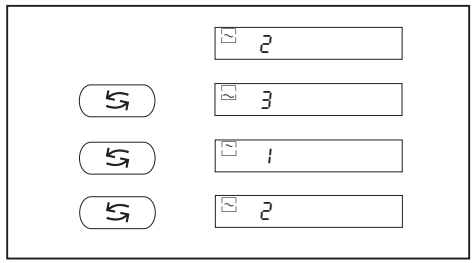
Reset balance setting and functions to factory setting (rESEt)

→ Select "rESEt" and press and hold Cal/Menu until "r donE" is displayed.
The balance is now reset to the factory setting and returns to the weighing mode.
The **factory setting differs** according to the country and the model.

[~] 2	normal balance environment	PrintEr	Attachment to printer or host
Unit 1	g	bd2400	Transmission rate
Unit 2	g	7b–E	Character format
Unit 3	g	HS oFF	Transmission protocol
A. oFF –	no automatic shutdown		

Printig out the balance setting (LISt)

→ Select "LISt" and press and hold Cal/Menu until "StorEd" is displayed.
The current balance setting is printed out and stored.
The selection "LISt" appears only when a LocalCAN universal interface is installed (section 5.2, 6.1).



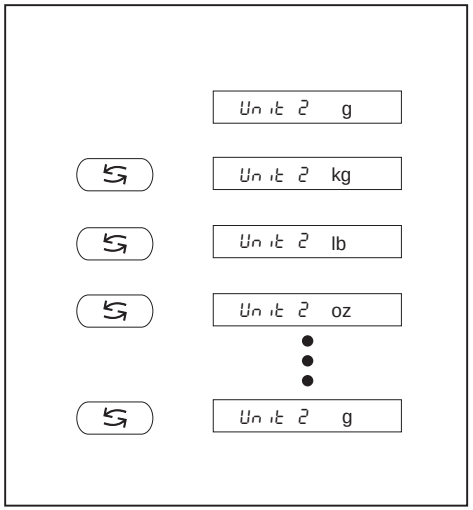
4.2.2 Adjusting the vibrations adapter on CB and GB balances

You can use the vibration adapter to match the balance to the ambient conditions.

[~] 2 Setting with normal balance surroundings (factory setting).

[~] 3 Setting with unstable balance surroundings. The balance operates slower but is less sensitive to external influences (drafts, vibrations, etc.).

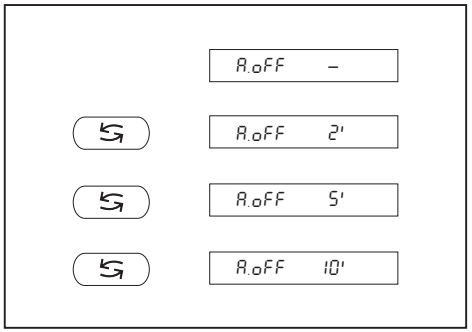
[~] 1 Setting with very stable balance surroundings. The balance operates very quickly but is sensitive to external influences (drafts, vibrations, etc.).



4.2.3 Unit 1, 2, 3 – selecting unit 1, 2, 3 with CB and GB balances

The following weight units can be selected. With **certified balances/scales,** the unit selection can be blocked following installation if required by national legislation.

Unit		Conversion factor			Comments
g	gram				
kg	kilogram	1 kg	=	1000 g	not with 1 mg balances
lb	pound	1 lb	≈	453.59237 g	not with 0.1 mg balances
oz	ounce	1 oz	≈	28.349523125 g	
ozt	troy ounce	1 ozt	≈	31.1034768 g	
GN	grain	1 GN	≈	0.06479891 g	not with 1 g balances
dwt	pennyweight	1 dwt	≈	1.555173843 g	
ct	carat	1 ct	=	0.2 g	
mg	milligram	1 mg	=	0.001 g	only with 0.1 mg and 1 mg balances
mo	momme	1 mo	≈	3.749999953 g	
m	mesghal	1 m	≈	4.6083162	
H tl	Hong Kong taels	1 H tl	≈	37.42900 g	selectable only in unit 2
S tl	Singapore taels	1 S tl	≈	37.799366256 g	selectable only in unit 2
t tl	Taiwan taels	1 t tl	≈	37.499995313 g	selectable only in unit 2



4.2.4 A. oFF – setting automatic shutdown

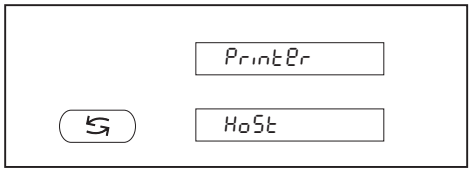
The automatic shutdown appreciably extends the operating life in line-independent operation with the PP-B10 PowerPack.
When the automatic shutdown is activated, the balance switches itself off if no weighing has been performed during the specified time. With the PowerPack the balance is then off, without the PowerPack it is on standby.

A. oFF – no automatic shutdown (factory setting)

A. oFF 2 automatic shutdown after 2 minutes

A. oFF 5 automatic shutdown after 5 minutes

A. oFF 10 automatic shutdown after 10 minutes

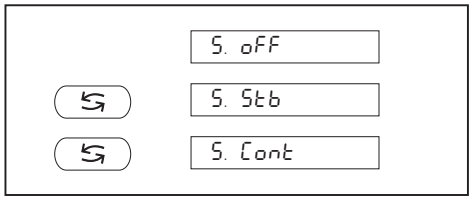


4.2.5 Selecting peripheral device

In this menu option you can select the desired peripheral device. The balance automatically stores the appropriate settings for every peripheral device.

Printer — Attachment to a printer (e.g. METTLER TOLEDO GA42 Printer), (section 5.2).
Factory setting: bd 2400, 7b–E, HS oFF

Host — Attachment to any peripheral device.
Factory setting: bd 9600, 8b–no, HS SoFt



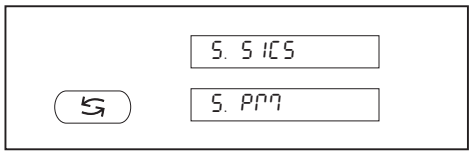
4.2.6 Selecting data transfer mode

In this menu block you tell the balance how a value should be transferred to a peripheral device (e.g. computer). This menu option appears only if the setting “HoSt” has been selected in the menu option “Selecting peripheral device”.

S. oFF — Data transfer mode switched off

S. Stb — The next possible stable value will be transferred after triggering of the Print/Transfer command.

S. Cont — All values will be automatically transferred.



4.2.7 Selecting data transfer format

With the “S. SICS” setting the data transfer formats described in MT-SICS are used. You will find the description in the enclosed description of the operating instructions (Reference manual MT-SICS).

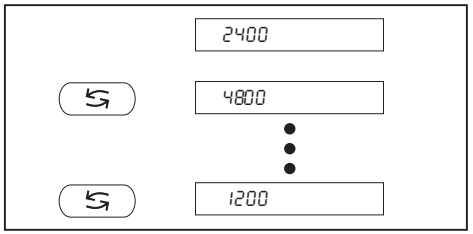
With the “S. PM” setting the following data transfer formats of the PM balances are used.

S. Stb: `-----1.67890-g`
S. Cont: `S----1.67890-g`
`SD---1.39110-g`

Note

If you wish to use other data transfer formats of the PM balances with your B-balance, please use the optional B-M emulation software which emulates all interface commands of the PM balances (see section 5.3).

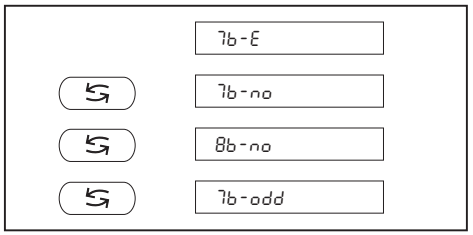
The interface is **unidirectional**. Incoming interface commands in the setting “S. PM” are not processed further.



4.2.8 Setting baud rate (data transmission rate)

The data transmission rate (baud rate) determines the speed of the transmission via the serial interface. The unit is baud (1 baud (bd) = 1 bit/second).

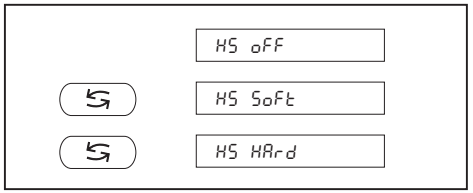
The following settings are available: 150 bd, 300 bd, 600 bd, 1200 bd, 2400 bd, 4800 bd and 9600 bd.



4.2.9 Setting parity/bits

In this menu option you can set the character format for the attached peripheral device.

7b–E	7 bits/even parity
7b–no	7 bits/no parity
8b–no	8 bits/no parity
7b–odd	7 bits/odd parity



4.2.10 Setting handshake

This menu option allows you match the data transmission to different serial receivers.

HS oFF	No handshake
HS SoFt	Software handshake (XON/XOFF)
HS HArd	Hardware handshake (DTR/CTS)

Note

If you have selected the setting “HS HArd”, the attached peripheral device must be switched on. If it is switched off, the balance is blocked.

5 Technical data and optional equipment

5.1 Technical data

Standard equipment

- Protective cover; with CB balances, the protective cover is part of the optional equipment
- AC adapter to national codes
  (Power supply: 115 V/230 V, -20/+15%, 50/60 Hz, 65/30 mA, 6 VA)
  (Power supply balance: 8–14.5 V, 50/60 Hz or 9.5–20 V = 1.5 VA)
- Device for weighing below the balance
  With GB16001 the required hook is an option
- Carat pan with CB balances
- Calibration weight with CB balances and B154
- RS232C interface

Degree of protection

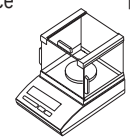
- Protects against dust and water.
- Pollution degree: 2
- Overvoltage category: II

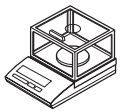
Ambient conditions

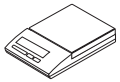
The technical data are valid under the following ambient conditions:

- Ambient temperature 10 °C…30 °C
- Relative atmospheric humidity 15 %…85 %, noncondensing
- Height above sea level up to 4000 m

The operability is assured between ambient temperatures 5–40 °C.

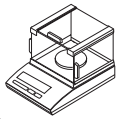
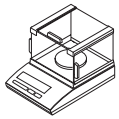
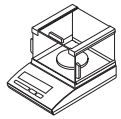






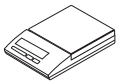
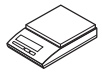
School balances (College-B)	B154	B303	B502	B1302	B3002 DeltaRange	B3001
Readability	0.1 mg	0.001 g	0.01 g	0.01 g	0.01 g*/0.1 g	0.1 g
Maximum capacity	151 g	310 g	510 g	1310 g	600 g*/3100 g	3100 g
Repeatability (s)	0.1 mg	0.001 g	0.01 g	0.01 g	0.01 g*/0.1 g	0.1 g
Linearity +/–	0.3 mg	0.003 g	0.02 g	0.02 g	0.02 g*/0.1 g	0.1 g
Calibration weight Calibration weight with certified balances	100 g – [2]	200 g [1] – [2]	500 g [1] – [2]	1000 g [1] – [2]	2000 g [1] – [2]	2000 g [1] – [2]
Overall dimensions (WxDxH) in mm	190x290x339	190x290x204	190x290x62			
Weighing pan in mm	ø 80	ø 100	180x166			
Effective height above weighing pan	232 mm	118 mm				
Net weight (with packaging)	5 kg (8.1 kg)	3 kg (5 kg)	2.5 kg (4.5 kg)			

* Values in fine range (DeltaRange) [1] Optional equipment [2] Not available as certified version

Carat balances	CB203	CB603	CB1503 DeltaRange
Readability	0.001 ct / 0.01 ct / 0.01 g	0.001 ct / 0.01 g	0.001 ct* / 0.01 ct / 0.01 g
Maximum capacity	210 ct / 610 ct / 122 g	610 ct / 122 g	500 ct* / 1600 ct / 320 g
Repeatability (s)	0.001 ct / 0.005 ct / 0.001 g	0.001 ct / 0.001 g	0.001 ct* / 0.005 ct / 0.003 g
Linearity +/–	0.002 ct / 0.005 ct / 0.01 g	0.002 ct / 0.01 g	0.002 ct* / 0.005 ct / 0.01 g
Calibration weight Calibration weight with certified balances	100 g (500 ct) 100 g (500 ct)	100 g (500 ct) 100 g (500 ct)	200 g (1000 ct) 200 g (1000 ct)
Overall dimensions (WxDxH) in mm	190x290x252	190x290x252	190x290x339
Weighing pan in mm	ø 80	ø 80	ø 80
Effective height above weighing pan	159	159	232
Net weight (with packaging)	3.7 kg (6.5 kg)	3.7 kg (6.5 kg)	4.6 kg (7.5 kg)

* Values in fine range (DeltaRange)

Gold balances	GB802	GB1302	GB2002	GB3002 DeltaRange	GB3002	GB1501	GB3001	GB6001	GB16001
Readability	0.01 g	0.01 g	0.01 g	0.01 g	0.01 g*/0.1 g	0.1 g	0.1 g	0.1 g	0.1 g
Maximum capacity	810 g	1310 g	2100 g	3100 g	600 g*/3100 g	1510 g	3100 g	6100 g	16100 g
Repeatability (s)	0.01 g	0.01 g	0.01 g	0.01 g	0.01 g*/0.05 g	0.05 g	0.05 g	0.05 g	0.5 g
Linearity +/–	0.02 g	0.02 g	0.02 g	0.03 g	0.02 g*/0.1 g	0.1 g	0.1 g	0.1 g	0.5 g
Calibration weight – with certified balances	500 g [1)] 800 g [1)]	1000 g [1)] 1300 g [1)]	2000 g [1)] 2000 g [1)]	2000 g [1)] 3000 g [1)]	2000 g [1)] 3000 g [1)]	1000 g [1)] 1500 g [1)]	2000 g [1)] 3000 g [1)]	2000 g [1)] 6000 g [1)]	8000 g [1)] 16000 g [1)]
Overall dimensions (WxDxH) in mm	190x290x62							190x290x82	381x321x92
Weighing pan in mm	180x166							175x166	349x232
Net weight (with packaging)	2.5 kg (4.5 kg)							2.7 kg (4.2 kg)	6.8 kg (8.3 kg)

* Values in fine range (DeltaRange)

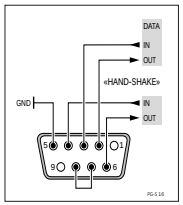
[1)] Optional equipment

5.2 Interface

RS232C interface and interface accessories

Every B balance is fitted with an RS232C interface for attachment to a peripheral device (e.g. printer or PC with a 9-pin male connector). Matching to a different device can be carried out in the menu (sections 4.2.5–4.2.8).

You will find a detailed description of the available interface commands in the enclosed brochure "Reference Manual MT-SICS, available in English only).



The wide range of features of the B balances regarding documentation of the results can not be exploited to the full until a printer, e.g. the GA42 or LC-P45 from METTLER TOLEDO is attached. The printed results make a decisive contribution to a simple way of working in compliance with GLP/GMP.

Printers with normal paper

- Application printer with adjustment, statistics and multiplication function as well as time and date, 24 characters — LC-P45
- Simple printer, 24 characters, without time/date — GA42

Cables and cabling accessories

- RS9-RS25: (m/f), length 2 m — 11101052
- RS9-RS9: (m/f), length 1 m — 11101051
- RS9-RS9: (m/m), length 1 m — 21250066

5.3 Optional equipment

Calibration weights

Available as **OIML** weights (E1) (E2, F2 with certificate) for further details, see METTLER TOLEDO weights brochure — 721192

or as **calibration** weights (not OIML)

Draft shields

CB (all models)	224371
B154	224370
B303	224372

Note: CB and B154 draft shields can also be used for B303 models.

Protective covers (set of 3)

B154, CB1503	228183
B303, CB203, CB603	224007
B502–3001, GB1302–3001	224008
GB6001	228182
GB16001	230018

Dust covers for B154 — 238465

AC adapters

Euro	(230 V)	228063
Euro (ground contact)	(230 V)	228198
UK	(240 V)	228066
US	(120 V)	228064
Japan	(100 V)	228065
Australia (bench version)	(240 V)	228190

Power supply unit

for hazard zone 2 for all models — PS-EX 2

PowerPack

Line-independent, rechargeable external power source, for 10 hours weighing operation (see section 4.5) — PP-B10

Connection plate PowerPack/balance

long, for B, GB	230166
short, for GB16001	230168

Hook for weighing below the balance

needed only for GB16001 — 21301097

Density kits for B154, CB

- for determination of solids — 33360
- for determination of liquids with displacement body — 33360+210260

Transport case

- for all models (except GB16001) and B models (except B154) accommodation for balance and PowerPack — 224009
- for GB16001, accommodation for balance and PowerPack 230031

Antitheft devices

- Cable and lock (for all models) — 590101
- Bolt and lock (not for GB16001) — 229175

B-M emulation — 21301730

Software EPROM for the use of B balances in systems together with METTLER TOLEDO PM balances

6 Appendix

6.1 Printout examples with LC-P45 and GA42 Printers

- **Functions triggered by balance**

Function: **Calibration**

```
-- BALANCE CALIBRATION -
Date:  ..................
Time:  ..................

METTLER TOLEDO
Balance
Type:              CB203
SNR:          1116150017

Weight ID: ..............
Weight:       500.000 ct

Ext. calibration done

Signature:

.........................
--------- END ----------
```

Function: **List**
Printout of the current balance settings

```
--------- LIST ---------
Date: ..................
Time: ..................

METTLER TOLEDO
Balance
Type:     CB203
SNR:      1126203803

SW-Ver.:  1.70 2.0
Vibr.:    2
Unit 1:   g
Unit 2:   g
Unit 3:   g
A.Off:    -
Output:   Printer
Baud:     2400
Bit:      7
Parity:   even
Handshake:off
--------- END ----------
```

- **Functions triggered by printer** [1)]

Function: **Calibration**
With automatic insertion of date and time

```
-- BALANCE CALIBRATION -
08.04.97        15:13:37

METTLER TOLEDO
Balance
Type:              CB203
SNR:          1126203803

Weight ID: ..............
Weight:     500,000 ct

Ext. calibration done

Signature:

.........................
--------- END ----------
```

Function: **Verification**
With automatic insertion of date and time, with fixed weight (calibration weight)

```
----- BALANCE TEST -----
08.04.97        15:14:22

METTLER TOLEDO
Balance
Type:              CB203
SNR:          1126203803

Weight ID: ..............

Target:     ..............
Actual:      500,001 g
Diff:       ..............

External test done

Signature:

.........................
--------- END ----------
```

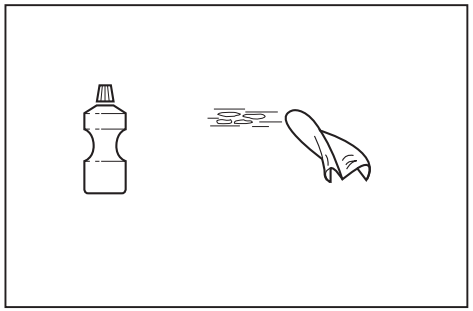
Function: **Statistics**

```
08.04.97         15:18:55
ID               45.698-3
SNR:           1126203803

1              100.00 g
2              100.01 g
3              100.01 g
4              100.00 g
5              100.00 g
n                   5
x              100.004 g
s                0.005 g
srel             0.01 %
min.           100.00 g
max.           100.01 g
dif.             0.01 g

--------- END ----------
```

Function: **Multiplier**
With rounding to the nearest 5

```
08.04.97         15:21:50
ID               45.698-3
SNR:           1126203803

Factor           1.650
                99.99 g
*             164.9835
```

[1)] possible only with LC-P45



6.2 Preventive maintenance

Servicing

Regular servicing of your balance by a service engineer extends its life. Ask your METTLER TOLEDO dealer for details of the servicing possibilities.

Cleaning

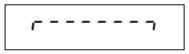
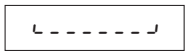
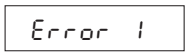
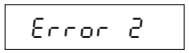
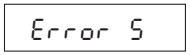
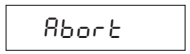
The balance housing and the weighing pan are made of high-grade, resistant materials. All usual cleaning agents can thus be used.

Note

After working with chemicals, it is advisable to wash or clean the weighing pan and the baseplate (if draft shield fitted).

Although all materials are of high quality, corrosion may occur if corrosive substances are stored for a lengthy period of time (and on exclusion of air, e.g. by a coat of grease) on chrome steel.

6.3 What if...?

Error/error message	Cause	Rectification
	Overload	→ Remove sample from weighing pan, rezero (tare). If overload appears when balance switched on, recalibrate (readjust) balance.
	Underload	→ Remove sample from weighing pan, rezero. → Check whether weighing pan is positioned properly. If underload appears when balance switched on, recalibrate (readjust) balance.
	No stability in taring or calibration (adjusting)	→ Wait for stability before pressing key. → Ensure more stable ambient conditions.
	No or wrong calibration weight on pan	→ Place required calibration weight in center of pan.
	Balance/scale software not sufficiently up-to-date for operation with LC-B interface.	→ To change the balance/scale software 299702 (Order No. 600150), ask your METTLER TOLEDO dealer.
	Wrong or missing weighing pan	→ Mount correct weighing pan.
	Abort of the adjustment using the →0/T← key.	

6.4 Index

AC adapter 5, 7
Adjustment 8
Ambient conditions 17
Antitheft device 6
Automatic shutdown 14

Battery operation 19

Calibration → Adjustment
Carat scales 2, 11, 18
Cautionary notes 5
Certified balances 3
Certified balances 3
Certified version 2
Cleaning 21
Connecting to power supply 5, 7
Connection 5, 7

Degree of protection 17
DeltaRange 2
DeltaRange balances 10
Draft shield 19

Error/error message 22

Factory setting 13
Fine range 10

Gold scales 2, 11, 18

Hazard zone 5

Interface 16, 19

Leveling 7

Menu 4, 12

Operation 4
Optional equipment 19

Power supply 7
Power supply units 19
PowerPack 14, 19
Preventive maintenance 21
Printers 19, 20
Printout examples 20
Protective covers 19

RS232C interface 19

School balances 2, 11, 17
Service 21
Setting up 6
Stability detector 9
Standard equipment 5
Standard equipment 17
Switching off 9
Switching on 9

Taring 10
Technical data 17

Unstable balance environment 13

Vibration adapter 13

Weighing 9
Weighing mode 4
Weighing pan 3
Weight units 11, 14

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P11780200

Subject to technical changes and to the availability of the accessories supplied with the instruments.

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